

**NETWORK INTERFACE DEVICE EMPLOYING
A DMA COMMAND QUEUE**

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ABSTRACT OF THE DISCLOSURE

A network interface device couples a host computer to a network. The network interface device includes a processor and a DMA controller. The processor causes the DMA controller to perform multiple DMA commands before the processor takes a particular software branch. The processor issues the DMA commands by placing the DMA commands in a memory and then pushing values indicative of the DMA commands onto a DMA command queue. The values are popped off the DMA command queue and are executed by the DMA controller one at a time. The DMA commands are executed in the same order that they were issued by the processor. The processor need not monitor multiple DMA commands to make sure they have all been completed before the software branch is taken, but rather the processor pops a DMA command complete queue to make sure that the last of the DMA commands has been completed.